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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,085	08/27/2001	Takenobu Sunagawa	011080	2186

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ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP  
1725 K STREET, NW  
SUITE 1000  
WASHINGTON, DC 20006

EXAMINER

ZALUKAEVA, TATYANA

ART UNIT PAPER NUMBER

1713

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/926,085

Applicant(s)

SUNAGAWA ET AL.

Examiner

Tatyana Zalukaeva

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-9 is/are pending in the application.
- 4a) Of the above claim(s) 4,5,7 and 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,6 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1 and 3-9 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Claims 1 and 9 have been amended to introduce the new range of a methacrylate monomer having an oxygen atom in addition to an ester bond from 0.1-10% to 0.1 - 5%. In claim 9 the monomer is specified as one having epoxy group.
2. Claims 1, 3-9 are pending. Claims 4, 5, 7 and 8 are withdrawn from consideration as being drawn to non-elected inventions.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1, 3, 6, are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. 4,737,548 to Kojima et al. or U.S. 4,070,532 to Hammer.

Kojima discloses an example wherein 1.7 kg of ethylene and 30 g of glycidyl methacrylate\ comonomer were charged into a 3.8 liter autoclave, followed by copolymerizing in the presence of di-tertiary-butyl peroxide (Example 1, Example 3 in col.7, also col.2, lines 30-35, 50-60, 65-67). The amount of initiator is between 0.0001 and 1% by weight (col.3, lines 1-5).

Hammer discloses a copolymer of ethylene, vinyl acetate, CO and glycidyl methacrylate (60/25/13/2.4) with melt index 52 (ASTM D1238-65t, condition E) is prepd. at 180 degrees C and 1630 atmospheres in the presence of tert-butyl peroxy-isobutyrate. (see Example 1,3,5,11, see also paragraph bridging col. 1 and 2, col.2, lines 55-57, col. 3, lines 60-65, col.4, lines 1-3, 42-45).

Because of the nature of product-by process claims, the Examiner cannot ordinarily focus on the precise difference between the claimed product and the disclosed product. It is then Applicant's burden to prove that an unobvious difference exists. See *In re Marosi*, 218 USPQ 289, 292-293 (CAFC 1983).

See also footnote 11 O.G. Notice 1162 59-61, wherein a 35 USC 102/103 rejection is authorized in the case of product-by-process claims because the exact identity of the claimed product or the prior art product cannot be determined by the Examiner.

Resuming the above, the patentability of the product is based on the product *oper se*, not on the process by which it was made, consult, *In re Thorpe*, 227 USPQ 964 (CAFC 1985) the Examiner rejected product-by-process claims over a product, which although prepared in a different manner, appeared to be the same (*prima facie*) as the claimed product.

The molecular weight limitations is presumable an inherently present, since the polymer of the instant claims is substantially identical to the polymers of the prior art by their chemical composition. Products of identical chemical composition cannot have mutually exclusive properties. A chemical composition and its properties are inseparable. Therefore if the prior art teaches the identical chemical structure, the properties and characteristics applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705,709,15 USPQ2d 1655,1658 (Fed. Cir. 1990).

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima in view of Tugukuni et al.

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Kojima copolymerizes his comonomers in the presence of conventionally used chain transfer agents. The disclosure of Kojima does not specifically recognize the chain transfer agents of the instant claims.

Tugukuni discloses a thermoplastic resin composition, comprising one of the ingredients as a copolymer obtained as in Example 8 in col.15, wherein all the components and are within the limitations of the instant claim 1 were radically polymerized according to any known methods. In the polymerization, as the polymerization initiator, there can be used, for instance, inorganic peroxides such as ammonium persulfate, potassium persulfate, hydrogen peroxide and percarbonates, organic peroxides such as acyl peroxides (e.g., benzoyl peroxide), alkyl hydroperoxides (e.g., **tert-butyl hydroperoxide** and p-menthane hydroperoxide) and dialkyl peroxides (e.g., di-tert-butyl peroxide), and nitrile compounds such as alpha.,alpha.'-azo-bisisobutyronitrile. The amount of the catalyst is not particularly critical in this invention, but in general, the catalyst is used in an amount of 0.01 to 5% by weight of the total monomers. A chain transfer agent can be used in order to adjust the molecular weight, the preferred one is a dodecyl mercaptan (col. 6, lines 60-68, see Examples 2, 5, 8, 11).

It would have been obvious to those skilled in the art at the time the invention was made to include notoriously used mercaptan chain transfer agents utilized by Tugukuni for the similar polymer in lie of the generically taught chain tranfer gents of Kojima with the reasonable expectation of success.

***Response to Arguments***

6. Applicant's arguments with respect to claims 1, 3, 5, and 9 have been considered but are moot in view of the new ground(s) of rejection.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (571) 272-1115. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tatyana Zalukaeva  
Primary Examiner  
Art Unit 1713

July 6, 2004

A handwritten signature in cursive script, appearing to read 'Zalukaeva', with a long horizontal flourish extending to the right.